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## **Appendix B Market Research Considerations**

### **Examples of Information To Provide To Industry**

#### **General Information**

Operating characteristics for hardware and software.

- Environmental conditions for use.
- Usage (e.g., fixed, airborne, tactically deployable).

#### **System Interface or Integration Requirements**

- Computer language, speed, throughput, ports, memory and expansion potential.
- Radio transmission frequency requirements and allocation status.
- Rules for Government use of frequency spectrum.
- Human factors considerations.

#### **Maintainability Information**

- Self-test requirements.
- Limitations, if any, on organizational-level support equipment.
- Communications-Computer System Interface Information
- Software portability to other communications-computer systems.
- Operating duty cycle (e.g., 24 hours, intermittent).
- Input power quality (drops, surges, spikes, noise).
- Essential safety characteristics.
- Reliability, Maintainability, and Survivability data.
- Nuclear hardening requirements.
- Chemical, biological, and radiological survivability data.
- Electromagnetic compatibility.

### **Logistics Support Information**

- Planned maintenance echelons.
- Maintainer proficiency levels.
- *Software maintenance plans.*
- Limitations on evacuation of reparable items (battlefield, underground, rough handling).
- Maintenance environment (weather, mud).
- Supply support, support equipment needs, limitations.
- Training needs.
- Technical data needs.
- Transportability.

### **Information Obtainable from Market Investigations**

While the value, type, and complexity of the needed products will influence the data gathered, you may need to obtain the following categories of information from the market investigation.

#### **Product Availability Data**

Ask only for information you really need for acquisition planning and decisions

- Product quality, reliability, and maintainability experience of similar users.
- List of commercial and NDI products and company services satisfying identical or similar service requirements.
- Product descriptions used by other government activities or used in commercial transactions, including commercial specifications and standards.
- Stability of current configuration and technology.

#### **Industry Data**

- Number of manufacturers.
- Size and location of manufacturers and their current market.
- Product distribution channels.

- Business practices in sales and distribution from manufacturers to wholesaler, distributor, or retailer, to user.
- Production capacity to meet requirements as part of commercial sales and the appropriate time to buy.
- Packaging, handling, storage, and transportation practices.
- Average time between model changes and practice of providing continued parts inventories, upgrades, or production for phased-out models.
- Length of time the product has been produced.

#### **Market Acceptance Data**

- Manufacturer test results or results from independent test organizations.
- Product quality, reliability, and maintainability experience of similar users.
- Annual sales.
- Description of contractor's quality controls including extent of statistical process controls.
- Warranty terms and practices, annual returns under warranty.
- Need for any preproduction or production qualification testing and special quality assurance requirements.
- Product evaluation criteria (including life-cycle criteria, as applicable).
- Hardware, software, and manpower interface issues such as human factors and product safety as experienced by similar users.

#### **Product Support Data**

- Repair parts availability and lead times, documentation, pricing, and distribution systems.
- Customer service, installation, checkout, and user operation and maintenance instructions.
- Requirements and provisions for manpower and personnel.
- Competitive or sole source repair and support base.
- Training and training support requirements. Requirements for and availability of tools, test equipment, computer support resources, calibration procedures, operations, and maintenance manuals.

- Warranty procedures and commercial repair capabilities.
- Manufacturer calibration, repair, and overhaul practices and capabilities documentation.
- Manufacturer commitment to out-year support.
- Degree of technical data package availability.

### **Sample market Investigation Questions**

The following are examples of questions you can ask in gathering information to evaluate the potential opportunities for the use of NDI. These questions should be directed to potential suppliers. You can also send similar questionnaires to current commercial and military users of the products under consideration, especially when quality and logistics experience is critical to the decision to use NDI. For potential high-cost or critical commercial and nondevelopmental items, it may be beneficial to conduct on-site visits to manufacturers and their users to obtain the necessary information.

In addition to the following general questions, you should solicit specific questions peculiar to the item being acquired from functional discipline proponents, independent testers, and technical experts. This information (regarding performance, operation, and design features), must be included in the test and evaluation plan.

#### **Questions about the Item**

***What portions of the system or equipment that you intend to provide are commercial items? What portions are other NDI?***

***Must the item be modified to meet requirements?*** If so, are you or your vendor(s), as applicable, willing to share design visibility and control with the government or arrange for licensing of other manufacturers?

***How stable is the design of the equipment?*** Give history and your perception of future stability prospects for each design proposed.

***How mature is the current design?*** What are your criteria for measuring the degree of maturity?

***How long has the item been on the market?*** How many are currently in use and in what environments? What are the prospects for product longevity? How long will you support the item?

#### **Questions about Reliability, Maintainability, and Survivability**

***What is the reliability history of the product? In what environments?*** (c.g. mean time between failure, corrective maintenance actions)

***What are the maintainability features of the design?*** (e.g., self-test features, accessibility, need for separate support equipment to verify failures, preventive maintenance needs, mean time between repair)

### **Questions about Logistics Support**

***What are the existing maintenance, repair, and spare parts arrangements for the item?*** How are current customers supported?

***Are you able to support the item for the duration of the expected military use?*** The Department of Defense tends to keep items in use longer than civilian users.

***Will you allow the government to acquire licensing and subscription services to enable competition for maintenance?***

***If the nondevelopmental item is to be used as part of a system, how do you perceive the criticality of interfacing with other subsystems, software, etc. for overall system integrity?*** That is, if it later became necessary to replace a subsystem because the original became unsupportable, could it be done without driving a major modification or replacement of the entire system? Are special tools or test, measurement and diagnostic equipment required?

***Can the proposed item be maintained according to the conditions we have given you, or will special arrangements be required?*** If so, what are they?

Is there a competitive market for contract repair and support of the proposed item, or is repair and support restricted to a single source?

***Is the proposed equipment covered by a warranty?*** What are the warranty's provisions? If your product will reach the Government through a prime contractor, will your warranty carry through with it? Identify at least three commercial users of your product. Also, name present military customers, if any.

***What training is needed to operate and maintain your product? What training sources are available to customers?***

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